

As compared with the chart for the preceding month (July) there appears to have been a slight but general drift of icebergs towards the south and east; later newspaper reports, however, indicate an extensive southerly movement of icebergs along the eastern coast of Newfoundland. So far as can be determined from the reports at hand, the region south of N. 45° appears to be comparatively clear of ice.

A comparison with the chart for the corresponding month of last year (1883) shows no material difference in the extent of the ice region, either in its eastern or southern limits. In 1883, as in the present year, only a few isolated bergs were observed south of N. 45°; in the strait of Belle Isle more ice has been reported this year than in the two preceding years; in 1883 the strait was clear of ice.

As regards August, 1882, the limits of the ice region during that month were not shown on the chart, the small area covered by the reports, rendering unnecessary the issue of such chart. No icebergs were reported after August 16, 1882, and those observed prior to that date were between N. 46°, W. 46° and N. 48° W. 48°.

Icebergs were reported during August, 1884, as follows:

3d.—Bark "Republik," in N. 48°, W. 45°, passed a large iceberg.

5th.—Bark "Orpheus," in N. 48° 20', W. 44° 40' passed two large icebergs; s. s. "State of Nebraska," in N. 47° 24', W. 47°, passed an iceberg.

6th.—Ship "Dora," in N. 48° 56', W. 48° 38', passed two very large icebergs about two hundred feet high, also several small pieces from twenty to forty feet high.

7th.—Ship "Dora," in N. 48° 20', W. 48° 35', passed six very large icebergs ranging from about one hundred to five hundred feet high.

8th.—S. S. "State of Georgia," in N. 48° 31', W. 46° 40', passed an iceberg and several small pieces.

9th.—S. S. "State of Georgia," in N. 47° 8', W. 51° 14', passed two icebergs.

10th.—S. S. "Lake Huron," in N. 48° 50', W. 49° 10', passed several large and small icebergs; s. s. "Gallia," in N. 43° 24', W. 48° 44', passed a large iceberg.

11th.—S. S. "City of Richmond," in N. 47° 50', W. 43° 50', passed three icebergs; also, in N. 47° 15', W. 46° 27', passed two icebergs.

12th.—Bark "Orpheus," in N. 44° 15', W. 52° 0', passed two large icebergs.

14th.—S. S. "Arizona," in N. 47° 10', W. 47° 37', passed an iceberg about fifty feet high.

16th.—Captain Gamon, commanding the s. s. "Rhodora," reported: 16th, 7 p. m., lat. 48° 14' N., long. 43° 40' W., the thermometer in the chart room fell to 48° and kept steady at that point until 9 a. m. the next day, when we passed a large iceberg in N. 47° 20', W. 47° 8'; soon after, the thermometer rose to its usual height; did not see any ice during the night, though it was clear, but no doubt other icebergs were passed. The s. s. "Azalea," in N. 47° 38', W. 45° 36', passed a large iceberg; ship "Susanne," in N. 46° 57', W. 46° 9', passed an iceberg; s. s. "Wyoming," in N. 46° 23', W. 47° 8', passed a large iceberg.

17th.—S. S. "Donau," in N. 46° 28', W. 46° 4', passed an iceberg, also in N. 46° 2', W. 47° 33', passed one large and one small berg; temperature of air, 52°·7; water, 46°; ship "Susanne," in N. 46° 25', W. 47° 30', saw two large icebergs.

19th.—S. S. "Egypt," in N. 45° 43', W. 48° 9', passed an iceberg.

20th.—S. S. "City of Berlin," in N. 46° 36', W. 45° 43', passed an iceberg and several small pieces; in N. 46° 10', W. 47° 30', passed two large icebergs.

24th.—Quebec, 24th.—Several incoming vessels report heavy masses of ice in the Gulf and Strait of Belle Isle. Some of the oldest mariners cannot recollect having encountered so much ice before at this time of the year.

27th.—Captain Dale, commanding the s. s. "Brooklyn" reported: Passed numerous icebergs and detached pieces from

Belle Isle eastward; last ice was seen in N. 52° 50', W. 50° 20'.

Saint Johns, N. F., Sept. 3d.—One hundred and forty-five icebergs lie between Wadham's Island and Trinity Bay, Newfoundland.

The "New York Maritime Register" of September 17th, publishes the following:

Three hundred and nineteen icebergs are now drifting southward between Cape Freels and Cape Race.

TEMPERATURE OF THE AIR.

[Expressed in degrees, Fahrenheit.]

The distribution of mean temperature over the United States and Canada for August, 1884, is exhibited on chart ii. by the dotted isothermal lines; chart v. shows the departures from the normal.

On the Pacific coast; in the northern plateau; northern New England; and from southwestern Texas to Arizona, the mean temperature for August, 1884, is slightly above the normal, the departures being greatest in the north Pacific coast region. In all other parts of the United States the mean temperatures are normal or below. The greatest departures below the normal are shown over an area extending eastward from Wyoming and Colorado to the Mississippi river, where they are from 4° to 6°. Over the country north of the thirty-fifth parallel of latitude and between the eighty-fifth meridian and the Rocky mountains, the departures below the normal temperature are from 2° to 5°.

In the following table are shown the normal temperatures for the month of August for a series of years; the mean temperatures for August, 1884, and the departures from the normal for each of the several geographical districts, as deduced from the records of the Signal Service:

Average temperatures for August, 1884.

Districts.	Average for Aug. Signal-Service observations.		Comparison of Aug., 1884, with the average for several years.
	For several years.	For 1884.	
	o	o	o
New England.....	67.9	67.6	0.3 below.
Middle Atlantic states.....	73.6	73.2	0.4 below.
South Atlantic states.....	78.7	77.2	1.5 below.
Florida peninsula.....	82.4	81.6	0.8 below.
Eastern Gulf states.....	79.4	78.3	1.1 below.
Western Gulf states.....	81.5	80.2	1.3 below.
Rio Grande valley.....	82.7	82.2	0.5 below.
Tennessee.....	77.0	75.2	1.8 below.
Ohio valley.....	74.9	73.1	1.8 below.
Lower lake region.....	69.7	67.9	1.8 below.
Upper lake region.....	66.9	64.4	2.5 below.
Extreme northwest.....	66.4	64.4	2.0 below.
Upper Mississippi valley.....	74.1	70.9	3.2 below.
Missouri valley.....	73.5	69.5	4.0 below.
Northern slope.....	67.6	65.3	2.3 below.
Middle slope.....	73.2	70.4	2.8 below.
Southern slope.....	76.8	75.1	1.7 below.
Southern plateau.....	79.2	78.5	0.7 below.
Northern plateau.....	68.9	71.8	2.9 above.
North Pacific coast region.....	63.4	66.8	3.4 above.
Middle Pacific coast region.....	70.1	70.9	0.8 above.
South Pacific coast region.....	76.2	76.6	0.4 above.
Mount Washington, N. H.....	47.2	47.7	0.5 above.
Pike's Peak, Colo.....	39.0	35.0	3.4 below.
Salt Lake City, Utah.....	75.3	72.6	2.7 below.

The following are some of the highest and lowest monthly mean temperatures reported from the Signal Service stations:

Stations reporting highest.	Stations reporting lowest.
Key West, Florida..... 83.9	Pike's Peak, Colorado..... 0
Galveston, Texas..... 83.8	Mount Washington, New Hampshire..... 47.7
Phoenix, Arizona..... 83.7	Cape Mendocino, California..... 56.0
Wickenburg, Arizona..... 83.4	Port Angeles, Washington Territory..... 58.1
Rio Grande City, Texas..... 83.2	Fort Bridger, Wyoming..... 58.7
New Orleans, Louisiana..... 82.3	San Francisco, California..... 58.7
Indianola, Texas..... 81.9	Pysht, Washington Territory..... 59.1
Red Bluff, California..... 81.5	Fort Stanton, New Mexico..... 59.4
Brownsville, Texas..... 81.3	Fort Maginnis, Montana..... 60.8
Cedar Keys, Florida..... 81.2	Eastport, Maine..... 61.0
Fort Concho, Texas..... 81.2	Saint Vincent, Minnesota..... 61.7
Fort Thomas, Arizona..... 81.0	Alpena, Michigan..... 62.0
Shreveport, Louisiana..... 80.2	Mackinaw City, Michigan..... 62.2

DEVIATIONS FROM MEAN TEMPERATURE.

The departures exhibited by the reports from the regular Signal Service stations are shown in the table of average temperatures for August, 1884. Voluntary observers report the following notes in connection with this subject:

Arkansas.—Lead Hill, Boone county: mean temperature, 76°.2, is 0°.1 above the August average of the two preceding years.

Dakota.—Webster, Day county: mean temperature, 71°.3, is 4°.3 below the August average of the two preceding years.

Illinois.—Mattoon, Coles county: mean temperature, 72°.7, is 4°.2 below the August average of the last four years.

Anna, Union county: mean temperature, 75°.2, is 1°.8 below the August average of the last nine years. The highest August mean of that period, 85°.5, occurred in 1879.

Riley, McHenry county: mean temperature, 65°.8, is 2°.8 below the August average for last twenty-three years, and in only three years during that period has the month of August been colder than that of the present year, viz: in 1866, 1868, and 1875. The mean temperature for the summer of 1884, is 66°.4, or 2°.3 below the summer average for the last twenty-three years; only the summers of 1875 and 1882 were colder.

Swanwick, Perry county: mean temperature, 73°.0, is 2°.4 below the August average for the last three years.

Collinsville, Madison county: mean temperature, 72°.3, corresponds to that for August, 1875, which was an unusually cool month.

Sycamore, De Kalb county: mean temperature, 65°.5, is 5°.9 below the August average for the three preceding years.

Indiana.—Wabash, Wabash county: mean temperature, 71°, is 1° below the August average for the last eight years.

Logansport, Cass county: mean temperature, 71°.8, is 2°.3 below the August average of the last twenty-five years.

Kansas.—Independence, Montgomery county: mean temperature, 72°.8, is 5°.9 below the August average for the last thirteen years.

Yates Centre, Woodson county: mean temperature, 73°.5, is 2°.9 below the August average of the last four years.

Wellington, Sumner county: mean temperature, 70°.1, is 6° below the August average for the last six years.

Maine.—Gardiner, Kennebec county: mean temperature, 65°.7, is 1° below the August average of the last forty-eight years.

Maryland.—Fallston, Harford county: mean temperature, 71°.2, is 0°.7 below the August average for the last ten years.

Massachusetts.—Worcester, Worcester county: mean temperature, 68°.5, is 0°.4 below the August average for the three preceding years.

Missouri.—Saint Louis: mean temperature, 74°.4, is 2°.1 below the August normal for Saint Louis.

New Jersey.—South Orange, Essex county: mean temperature, 69°.8, is 1°.7 below the August average for the last fourteen years. The mean temperature for the summer of 1884 is 69°.1, and is the lowest summer average of the last fourteen years.

New York.—Palermo, Oswego county: mean temperature, 66°.1, is 1°.3 below the average for the last thirty-one years.

North Volney, Oswego county: mean temperature, 68°.5, is 0°.3 above the average of the last seventeen years.

Ohio.—Wauseon, Fulton county: mean temperature, 68°.4, is 1°.5 below the August average of the last fourteen years. The mean temperature for the summer months (June, July and August), of 1884, is 69°.3, or 1° below the summer average of the last fourteen years.

Pennsylvania.—Dyberry, Wayne county: mean temperature, 65°.6, is 0°.3 above the August average for the last seventeen years. The minimum temperature (34°), on the morning of the 25th, is 3° lower than the lowest previously recorded during August.

Texas.—New Ulm, Austin county: mean temperature, 82°.6, is 0°.3 above the August average for the last thirteen years.

Table of maximum and minimum temperatures for August, 1884.

State or Territory.	Signal Service.			U. S. Army Post Surgeons, or Voluntary Observers.		
	Station.	Max.	Min.	Station.	Max.	Min.
Alabama	Montgomery	97	62	Marion	104	58
Do	Mobile	95	63	Calera	100	52
Arizona	Wickenburg	115	52	Fort McDowell	113	50
Do	Prescott	92	41	Texas Hill	120	71
Arkansas	Fort Smith	104	58	Devall's Bluff	104	50
Do	Little Rock	99	59	Newport	102	40
California	Red Bluff	107	55	Mammoth Tank	128	85
Do	Cape Mendocino	88	47	Cisco	79	24
Colorado	West Las Animas	101	52	Grand Junction	104	52
Do	Pike's Peak	49	23	Pueblo	97	54
Connecticut	New Haven	90	46	Voluntown	94	50
Do	New London	86	48	Hartford	96	42
Dakota	Fort Buford	100	44	Fort Buford	102	39
Do	Deadwood	83	40	Fort Meade	96	34
Delaware	Del. Breakwater	92	66			
District of Columbia	Washington City	95	57	Distributing Res'v.	98	60
Florida	Sanford	97	70	Waldo	96	66
Do	Pensacola	94	66	Fort Barrancas	96	67
Georgia	Augusta	94	64	Washington	103	52
Do	Atlanta	89	60	Camak	100	58
Idaho	Lewiston	101	48			
Do	Coeur d'Alene	94	39	Bunker Hill	98	45
Illinois	Springfield	91	49	Peoria	97	50
Do	Chicago	91	51	Fort Wayne	96	52
Indiana	Indianapolis	89	50	Spiceland	92	46
Do						
Indian Territory	Fort Hill	102	58			
Do	Cantonment	95	51	Fort Madison	93	59
Iowa	Des Moines	91	49	Muscataine	92	43.5
Do	Davenport	88	44	Yates Centre	100	47
Kansas	Dodge City	94	55	Westmoreland	95	48
Do	Leavenworth	93	50	Richmond	91	56
Kentucky	Louisville	92	57	Frankfort	90	49
Do				Minden	103	58
Louisiana	Shreveport	104	64	Cheneyville	98	56
Do	New Orleans	93	66	Cornish	91	47
Maine	Portland	88	53	Orono	89	44
Do	Eastport	86	46	Woodstock	92	47
Maryland	Baltimore	94	59	Great Falls	92	58
Do	Ocean City	88	62	Taunton	93	50
Massachusetts	Boston	94	51	Princeton	90	43
Do	Thatcher's Island	84	55	Hudson	96	40
Michigan	Port Huron	92	47	Fort Brady	88	35
Do	Alpena	91	39	Minneapolis	90	51
Minnesota	Saint Paul	90	50	Fort Snelling	101	45
Do	Saint Vincent	89	38	Hernando	100	54
Mississippi	Vicksburg	98	62	Oxford	96	56
Do				Miami	98	52
Missouri	Saint Louis	92	54	Centerville	94	44
Do						
Montana	Fort Custer and Poplar River	100	43	Fort Keogh	103	39
Do	Fort Benton	99	39	Fort Assinaboine	95	37
Nebraska	Omaha	88	53	Red Willow	96	47
Do	North Platte	92	48	Fort Robinson	97	42
Nevada				Golconda	105	60
Do				Wells	88	40
New Hampshire	Mount Washington	65	22	Readington	100	56
New Jersey	Sandy Hook	91	59	Salen City	95	48
Do	Cape May	86	57	Fort Union	92	43
New Mexico	Fort Craig	101	55	Lordsburg	102	70
Do	Fort Stanton	89	38	North Volney	97	49
New York	Oswego	93	44	Factoryville	93	36
Do	Rochester	92	43	Chapel Hill	99	56
North Carolina	Kitty Hawk	93	68	Highlands	82	52
Do	Charlotte	92	58	Jacksonburg	99	44
Ohio	Sandusky	93	54	Wauseon	94	39
Do	Toledo	92	48	Albany	96	52
Oregon	Ashland	106	44	Bandon	73	45
Do	Lakeview	90	38	Easton	98	62
Pennsylvania	Pittsburg	98	52	Well-berough	95	30
Do	Eric	89	51			
Rhode Island	Narragansett Pier	81	46			
Do	Point Judith	79	49			
South Carolina	Charleston	91	68			
Do				Anderson	100	60
Tennessee	Memphis	97	62	Greenville	95	57
Do	Nashville	94	56	Milan	99	54
Texas	El Paso	110	63	Paris	95	52
Do	Fort Elliott	101	54	Paris	104	80
Utah	Fort Thornburg	95	42	Fort Concho	103	60
Do	Salt Lake City	92	49	Nephi	92	40
Vermont				Promontory	106	54
Do				Charlotte	98	54
Virginia	Lyttelburg	92	58	Dorset	93	35
Do	Cape Henry and Norfolk	92	58	Summit	98	55
Do	Folk	92	65	Wytheville	86	48
Washington Territory	Dayton	102	42	Fort Spokane	103	44
Do	Port Angeles	79	41	Pleasant Grove	95	37
West Virginia				Helvetia	90	48
Wisconsin	Milwaukee	88	48	Prairie du Chien	90	51
Do	La Crosse	86	52	Nellville	89	37
Wyoming	Cheyenne	86	49	Fort Fred Steele	91	38
Do	Fort Bridger	82	35	Fort Bridger	84	31

Vermont.—Woodstock, Windsor county: mean temperature, 66°.9, is 1°.8 above the August average for the last seventeen years. The highest August mean in that period was 68°.4, in 1877; the lowest was 60°.7, in 1869.

Virginia.—Wytheville, Wythe county: mean temperature,

68° 0, is 3° below the August normal for a period of nineteen years.

Variety Mills, Nelson county: mean temperature, 71° 3, is 2° 1 below the August average for the last seven years. The

mean temperature for the summer months (June, July, and August) of 1884 is 71° 1, or 2° 6 below the summer average for the last seven years, and is the coolest summer for that period. West Virginia.—Helvetia, Randolph county: mean temper-

Table of comparative maximum temperatures for the month of August.

State or Territory.	Maximum for August, 1884, Signal Service.		Maximum since Signal-Service stations were opened—3 to 13 years.		Highest from any other source.		
	Station.	Temperature.	Station.	Temperature.	Year.	Place.	Temperature.
Alabama	Montgomery	97	Montgomery	103	1874	Mount Vernon Arsenal	104
Do	Mobile	96	Mobile	106	1874	Mobile	96
Arizona	Phoenix	115	Yuma	115	1879	Fort Mojave	119
Do	Maricopa	112	Maricopa	112	1877	Camp McDowell	108
Arkansas	Little Rock	99	Little Rock	102	1881	Fort Smith	102
Do	Fort Smith	104	Fort Smith	101	1882	Washington (near)	102
California	Red Bluff	107	Red Bluff	110	1878	Fort Yuma	107
Do	Los Angeles	102	Visalia	108	1879	Camp Gaston	114
Colorado	Denver	92	Denver	105	1878	Fort Lyon	108
Do	Pike's Peak	49	Pike's Peak	62	1878	Fort Garland	97
Connecticut	New Haven	90	New Haven	90	1873, 75, 81	New Haven	98
Do	New London	86	New London	90	1873	Columbia	90
Dakota	Yankton	86	Yankton	103	1873	Fort Randall	108
Do	Fort Buford	100	Fort Buford	107	1882	Fort Lincoln	110
Delaware	Delaware Breakwater	92	Delaware Breakwater	93	1881	Fort Delaware	101
District of Columbia	Washington City	95	Washington City	101	1881	Washington City	101
Florida	Jacksonville	94	Jacksonville	100	1874	Fort Barrancas	103
Do	Key West	95	Key West	95	1880, 1881	Fort King	100
Georgia	Augusta	94	Augusta	105	1878	Augusta Arsenal	100
Do	Savannah	92	Savannah	100	1878	McPherson Barracks	101
Idaho	Boise City	95	Boise City	103	1879	Fort Boise	121
Do	Lewiston	101	Fort Lapwai	115	1882	Fort Lapwai	103
Illinois	Springfield	91	Springfield	100	1881	Anna	109
Do	Chicago	90	Chicago	103	1881	Chicago	102
Indiana	Indianapolis	89	Indianapolis	101	1881	Lacoma	105
Do						Vevay	104
Indian Territory	Fort Sill	102	Fort Gibson	106	1874	Fort Gibson	116
Do	Fort Reno	100	Fort Supply	107	1881	Fort Sill	100
Iowa	Des Moines	91	Des Moines	103	1881	Fort Madison	103
Do	Keokuk and Dubuque	90	Keokuk	102	1873	Muscatine	104
Kansas	Leavenworth	93	Leavenworth	107	1874	Fort Riley	108
Do	Dodge City	94	Dodge City	102	1881	Fort Leavenworth	106
Kentucky	Louisville	92	Louisville	105	1881	Newport Barracks	96
Do						Chillicothe	96
Louisiana	Shreveport	104	Shreveport	105	1881	Baton Rouge	102
Do	New Orleans	93	New Orleans	96	1874, 1877	Point Pleasant	104
Maine	Portland	88	Portland	95	1876	Brunswick	98
Do	Eastport	86	Eastport	88	1880	Hancock Barracks	97
Maryland	Baltimore	94	Baltimore	98	1881	Fort McHenry	100
Do	Ocean City	88				Fort Washington	100
Massachusetts	Boston	94	Boston	97	1881	Amherst	98
Do	Thatcher's Island	84	Springfield	93	1879, 1882	New Bedford	91
Michigan	Port Huron	90	Detroit	99	1881	Marquette	100
Minnesota	Moorhead	88	Port Huron	96	1881	Thornville	101
Do	Saint Paul	90	Breckenridge	101	1876	Fort Ridgely	102
Mississippi	Vicksburg	98	Saint Paul	100	1883	Fort Snelling	97
Do			Vicksburg	100	1878	Columbus	99
Missouri	Saint Louis	92	Starkville	89	1882	Brookhaven	100
Do			Saint Louis	100	1881	Saint Louis	108
Montana	Fort Benton	99	Springfield	94	1882	Allenton	103
Do	Fort Custer	100	Fort Benton	106	1881	Fort Ellis	112
Nebraska	Omaha	85	Fort Knoch	109	1882	Fort Shaw	102
Do	North Platte	92	Omaha	105	1874	Fort McPherson	110
Nevada			North Platte	103	1878	Richland	104
Do			Winnemucca	102	1882	Camp Halleck	100
New Hampshire	Mount Washington	65	Pioche	96	1879	Camp McDermitt	104
Do			Mount Washington	72	1876	Anbourn	100
New Jersey	Sandy Hook	91				Portsmouth	97
Do	Little Egg Harbor	88	Sandy Hook	96	1881	Atco	100
New Mexico	Fort Craig	101	Little Egg Harbor	98	1882	Vineyard	100
Do	Fort Stanton	89	La Mesilla	107	1878	Fort Bascom	108
New York	Oswego	93	Santa Fe	97	1878	Fort McRae	107
Do	Rochester	92	Oswego	97	1881	Anbourn	110
North Carolina	Charlotte	92	Rochester	96	1874, 1882	Lansingburg	104
Do	Wilmington	90	Charlotte	101	1881	Fort Johnson	101
Ohio	Cincinnati	92	Wilmington	99	1878	Weldon	107
Do	Cleveland	89	Cincinnati	101	1881	Cincinnati	100
Oregon	Ashland	100	Cleveland	99	1881	Bellefontaine	104
Do	Portland	94	Umatilla	110	1882	Fort Dalles	104
Pennsylvania	Pittsburg	98	Portland	95	1876	Fort Hoskins	103
Do	Philadelphia	95	Pittsburg	100	1881	Mount Joy	105
Rhode Island	Block Island	78	Philadelphia	99	1881	Philadelphia	98
Do	Narragansett Pier	81	Newport	87	1876, 1879	Providence	95
South Carolina	Charleston	91	New Shoreham	88	1882	Fort Adams	95
Tennessee	Nashville	94	Charleston	98	1881	Charleston	98
Do	Memphis	97	Nashville	104	1874	Humboldt	104
Texas	Rio Grande City	105	Memphis	112	1882	Glenwood Cottage	98
Do	El Paso	110	Rio Grande City	102	1877	Fort Clarke	113
Utah	Salt Lake City	92	San Antonio	108	1877	Fort Graham	112
Vermont			Salt Lake City	101	1875	Camp Douglas	108
Do			Burlington	97	1876	Lunenburg	100
Virginia	Lynchburg	92				Charlotte	102
Do	Cape Henry and Norfolk	102	Lynchburg	100	1881	Alexandria	104
Washington Territory	Dayton	92	Cape Henry	103	1881	Fortress Monroe	99
Do	Olympia	92	Albino	109	1882	Fort Walla Walla	107
West Virginia			Olympia	86	1882	Fort Vancouver	98
Wisconsin	Milwaukee	88	Morgantown	92	1874, 1881	Flomington	93
Do	La Crosse	85	Milwaukee	98	1874	Fort Howard	100
Wyoming	Cheyenne	85	La Crosse	96	1874, 1881	Fort Crawford	98
Do	Fort Bridger	82	Cheyenne	95	1882	Fort Laramie	107
			Fort Washakie	100	1882	Fort Fetterman	107

ature, 66°.1, is 1°.4 below the August average for the last eight years.

Wisconsin.—Beloit, Rock county: mean temperature, 66°.5, is 3°.2 below the August average for thirty-five years.

MONTHLY RANGES OF TEMPERATURE.

The monthly ranges of temperature were greatest in the Rocky mountain regions and over the northern districts from the upper Missouri valley eastward to New England; they were least along the Atlantic and Gulf coasts and on the middle Pacific coast. The extreme ranges are 64° at Fort Benton, Montana, and 16° at Hatteras, North Carolina.

The following stations report monthly ranges of 50° or more:

Fort Benton, Montana, 64°; Phoenix, Arizona, 63°; Dayton, Washington Territory, 60°; Wickenburg, Arizona, 60°; Fort Buford, Dakota, 57°; Fort Custer, Montana, 57°; Poplar River, Montana, 57°; Fort Shaw, Montana, 56°; Cœur d'Alene, Idaho, 55°; Fort Bennett, Dakota, 53°; Fort Maginnis, Montana, 53°; Lewiston, Idaho, 53°; Spokane Falls, Washington Territory, 53°; Wilcox, Arizona, 53°; Alpena, Michigan, 52°; Fort Thomas, Arizona, 52°; Lakeview, Oregon, 52°; Red Bluff, California, 52°; Fort Assinaboine, Montana, 51°; Fort Thornburg, Utah, 51°; Fort Totten, Dakota, 51°; Maricopa, Arizona, 51°; Marquette, Michigan, 51°; Saint Vincent, Minnesota, 51°; Prescott, Arizona, 50°.

Monthly ranges of 28° or less occurred, as follows: Hatteras, North Carolina, 16°; Fort Macon, North Carolina, 20°; Cape Mendocino, California, 21°; Galveston, Texas, 22°; Charleston, South Carolina, 23°; Smithville, North Carolina, 23°; San Francisco, California, 23°; Cedar Keys and Key West, Florida, 23°; Block Island, Rhode Island, 24°; Indianola, Texas, 24°; Jacksonville, Florida, 24°; Savannah, Georgia, 24°; Kitty Hawk, North Carolina, 25°; Pike's Peak, Colorado, 25°; Barnegat City, New Jersey, 26°; Delaware Breakwater, Delaware, 26°; Neah Bay, Washington Territory, 26°; Ocean City, Maryland, 26°; Sanford, Florida, 26°; Brownsville, Texas, 27°; Cape Henry, Virginia, 27°; Wilmington, North Carolina, 27°; Atlantic City, Cape May, and Little Egg Harbor, New Jersey, 28°; Norfolk, Virginia, 28°; New Orleans, Louisiana, 28°; Pensacola, Florida, 28°.

GREATEST DAILY RANGES OF TEMPERATURE.

In the several districts the greatest daily ranges of temperature have varied as follows:

New England.—From 18° at Block Island, Rhode Island, on the 15th, to 32° at Eastport, Maine, on the 18th.

Middle Atlantic states.—From 17° at Barnegat City, New Jersey, on the 24th, to 28° at New York City, on the 15th, and at Washington City, District of Columbia, on the 19th and 20th.

South Atlantic states.—From 12° at Hatteras, North Carolina, on the 27th, to 24° at Charlotte, North Carolina, on the 14th.

Florida peninsula.—From 17° at Key West on the 30th to 20° at Cedar Keys on the 5th.

East Gulf states.—From 19° at New Orleans, Louisiana, on the 8th, to 26° at Vicksburg, Mississippi, on the 29th.

West Gulf states.—From 16° at Galveston, Texas, on the 6th, to 32° at Fort Smith, Arkansas, on the 31st.

Rio Grande valley.—From 24° at Brownsville, Texas, on the 9th, to 30° at Rio Grande City, Texas, on the 6th.

Tennessee.—From 24° at Nashville, on the 18th and 25th, to 26° at Knoxville, on the 27th.

Ohio valley.—From 23° at Louisville, Kentucky, and Cincinnati, Ohio, on the 13th and 16th, respectively, to 32° at Pittsburgh, Pennsylvania, on the 14th.

Lower lake region.—From 22° at Toledo, Ohio, on the 17th, to 31° at Oswego, New York, on the 25th.

Upper lake region.—From 19° at Chicago, Illinois, on the 11th, to 32° at Marquette, Michigan, on the 23d.

Extreme northwest.—From 32° at Moorhead, Minnesota, on the 8th and 11th, to 46° at Fort Buford, Dakota, on the 27th.

Upper Mississippi valley.—From 22° at La Crosse, Wisconsin,

Cairo, Illinois, and Saint Louis, Missouri, on the 14th, 26th, and 28th, respectively, to 29° at Dubuque, Iowa, on the 1st.

Missouri valley.—From 25° at Omaha, Nebraska, on the 22d, to 48° at Fort Bennett, Dakota, on the 31st.

Northern slope.—From 28° at Deadwood, Dakota, on the 12th, to 54° at Fort Benton, Montana, on the 26th.

Middle slope.—From 18° on the summit of Pike's Peak, Colorado, on the 26th, and 31° at Dodge City, Kansas, on the 5th, to 48° at West Las Animas, Colorado, on the 1st.

Southern slope.—From 33° at Fort Stockton, Texas, on the 12th, to 34° at Fort Concho, Texas, on the 1st.

Southern plateau.—From 30° at Fort Grant, Arizona, on the 3d, to 42° at Fort Apache, Arizona, on the 21st.

Middle plateau.—30° at Salt Lake City, Utah, on the 30th.

Northern plateau.—From 24° at Boise City, Idaho, on the 29th, to 44° at Dayton, Washington Territory, on the 29th.

North Pacific coast region.—From 33° at Portland, Oregon, on the 21st, to 42° at Olympia, Washington Territory, on the 2d.

Middle Pacific coast region.—From 20° at San Francisco, California, on the 22d, to 36° at Red Bluff, California, on the 22d.

South Pacific coast region.—From 28° at San Diego, California, on the 15th, to 38° at Los Angeles, California, on the 6th and 29th.

FROSTS.

On chart iv., are shown the limits of the regions over which frosts occurred on the mornings of the 9th and 25th, with the minimum isothermal lines for the same dates. The frosts which occurred on the 9th were confined to the upper lake region, and were generally light, causing no serious injury. The frosts of the 25th occurred in New England, New York, northeastern Pennsylvania, and northern New Jersey, and in many localities were very destructive to vegetation.

The following notes relate to frosts which occurred during August:

Arizona.—Prescott: on the 19th a killing frost occurred three and one half miles south of this station, causing injury to vegetation.

Colorado.—Frosts occurred on the summit of Pike's Peak on the 15th, 22d, 24th and 30th.

Connecticut.—Bridgeport: reports from points along Housatonic and Naugatuck railroads, state that heavy frosts occurred on the morning of the 25th.

New Haven: on the morning of the 25th, a light frost occurred in the surrounding country, but it was not sufficiently heavy to cause injury to vegetation.

Bethel, Fairfield county: a light frost occurred in the low lands on the 25th, causing no damage. Frosts also occurred at Voluntown, New London county, and at Hartford on the same date.

Dakota.—A light frost occurred on the morning of the 21st.

Illinois.—Edginton, Rock Island county: a light frost occurred on the 8th, causing no damage.

Indiana.—Wabash, Wabash county: a light frost is reported to have occurred in neighboring localities on the morning of the 9th; temperature at 6 a. m., 49°.

Iowa.—Manchester, Delaware county: a frost, cutting tender vegetation, occurred on the morning of the 8th.

Cresco, Howard county: a light frost occurred in some localities in this county on the morning of the 23d.

Maine.—Cornish, York county: a light frost occurred in the lowlands on the morning of the 25th.

Massachusetts.—Taunton, Bristol county: a light frost occurred here and in neighboring localities on the morning of the 25th. Reports from Fall River, Westborough, and Williamstown state that frosts occurred at those places on the same date.

Michigan.—Thornville, Lapeer county: the frosts of the 9th and 10th, killed the corn and buckwheat on the low grounds. Light frosts also occurred on the mornings of the 8th and 24th.

Swartz Creek, Genesee county: frost occurred on the morning of the 8th, when the temperature fell to 37°.

Frosts occurred at Lansing, Ingham county, and Traverse City, Grand Traverse county, on the 7th and 8th; at Ionia, Ionia county, on the 9th; and at Manistique, Schoolcraft county, on the 9th and 24th.

Escanaba: reports from points north of this station state that frosts occurred on the morning of the 7th; on the 8th, the first frost of the season occurred at Escanaba, that date being the earliest at which frost has occurred since the establishment of this station in 1871.

Port Huron: light frost occurred in the surrounding counties on the morning of the 10th. Corn, buckwheat, and vegetables were damaged. No frost occurred on the 10th in the county (Saint Clair), in which Port Huron is situated, but a light frost occurred on the morning of the 24th.

Alpena: frosts occurred on the mornings of the 9th, 10th, and 27th, causing no damage in this vicinity.

Nevada.—Carson City, Ormsby county: frosts occurred on the 20th and 21st.

New Hampshire.—Concord: a heavy frost occurred in the Merrimack valley during the night of the 24th–25th, causing considerable damage to vegetation. At Canaan, Grafton county, the temperature fell to 28°.

Berlin Mills, Coos county: a heavy frost occurred throughout this section on the morning of the 25th, causing considerable damage to crops in the lowlands. Nearly all garden vegetables are reported to have been destroyed.

Plymouth, Grafton county: a heavy frost occurred in this vicinity on the morning of the 25th, killing vines and damaging the corn crop.

New Jersey.—Readington, Hunterdon county: frost was seen on the morning of the 25th within one mile of this place.

Coldwell, Essex county: frost occurred in the lowlands on the 25th, causing no damage.

New York.—Rochester: a heavy frost, the first of this season, occurred on the morning of the 25th. Considerable damage was done to crops in this part of the state.

Albany: frost occurred at Berne, Albany county, on the morning of the 25th, vegetables were slightly injured.

Lyons, Wayne county: a heavy frost occurred throughout this section during the night of the 24–25th, causing a large amount of damage. The corn crop in Wayne county was almost entirely ruined, and it is estimated that about three-fourths of the buckwheat crop were destroyed. Hundreds of acres of peppermint were completely destroyed. In the eastern part of this county the tobacco crop was also injured.

Factoryville, Tioga county: the frost of the 25th killed buckwheat and other vegetation. A heavy fog protected the crops in the valleys.

Flushing, L. I., August 25th: farmers along the north shore of the island report a heavy frost last night, which has injured corn, cabbage, and potatoes to a considerable extent.

Montgomery, Orange county: there was a heavy frost in this section on the morning of the 25th. At Monticello, Sullivan county, the frost was also severe, and caused damage to vegetation.

Frosts also occurred at Le Roy, Genesee county, on the 24th; at North Volney, Oswego county; Ithaca, Tompkins county, and at Menand Station (near Albany), on the 25th; and at Cooperstown, Otsego county, on the 15th, 21st, and 30th.

Ohio.—Jacksonborough, Butler county: frost occurred on the 15th; minimum temperature, 44°.

Pennsylvania.—Blooming Grove, Pike county: frost occurred on the morning of the 25th.

Dyberry, Wayne county: the corn and buckwheat crops in the lowlands of this county were badly damaged by the frost of the 25th.

Erie: light frost is reported to have occurred near this place on the morning of the 25th.

Frost also occurred on the 25th at the following places in this state: Catawissa, Columbia county; Wellsborough, Tioga county; Quakertown, Bucks county; and Drifton, Luzerne county.

Vermont.—Chester, Windsor county: frost occurred on the morning of the 25th, causing considerable damage to crops.

Waterbury, Washington county: corn on the highlands in this county was damaged by the frost on the morning of the 25th. In the vicinity of Bennington, Bennington county, the fields of buckwheat were, in many places, entirely ruined.

Lunenburg, Essex county: the frost of the 25th killed the corn, beans, and other vegetables in the low lands.

Strafford, Orange county: a heavy frost occurred on the 25th, killing vines, etc.

Dorset, Bennington county: the frost which occurred during the night of the 24–25th caused slight damage to corn.

Frosts also occurred on the above date at Newport, Orleans county, and at Woodstock, Windsor county.

PRECIPITATION.

[Expressed in inches and hundredths.]

The distribution of rainfall over the United States and Canada, for August, 1884, as determined by the reports from nearly eight hundred stations, is exhibited on chart iii.

A comparison of the monthly precipitation with the average for August in former years, shows an excess over the northern and middle slopes; extreme northwest; northern part of the upper lake region; upper Mississippi and Missouri valleys; and in New England, the departures being greatest in the extreme northwest. In the lower lake region; Ohio valley and Tennessee; south Atlantic and Gulf states; Rio Grande valley; and southern slope, the precipitation for August is below the average. In the lower lake region, and middle and south Atlantic states, the deficiencies average less than 1.00; while in the other districts named they average from 1.00 to more than 5.00. Along the immediate Gulf coast and in the Rio Grande valley, the monthly rainfall has been very light. At Rio Grande City, Texas, where the average precipitation for the month of August during the last six years is nearly six inches, no rain fell throughout the month, and at Pensacola, Florida, the monthly rainfall was but 2.07, the average for August at that place in the four preceding years being more than 12.00. At New Orleans, Louisiana, there was a deficiency of more than 5.00 as compared with the average for the last thirteen years.

The first column of the following table shows the average precipitation for the month of August in each of the various districts as determined from the Signal Service observations for a series of years; in the second column are given the averages for August, 1884; and the third column shows the excess or deficiency of August, 1884, as compared with the average.

Average precipitation for August, 1884.

Districts.	Average for Aug. Signal-Service observations.		Comparison of Aug., 1884, with the average for several years.
	For several years.	For 1884.	
	Inches.	Inches.	Inches.
New England.....	3.88	5.39	1.51 excess.
Middle Atlantic states.....	4.80	3.86	0.94 deficiency.
South Atlantic states.....	6.38	5.68	0.70 deficiency.
Florida peninsula.....	7.47	5.49	1.98 deficiency.
Eastern Gulf states.....	6.01	2.02	4.01 deficiency.
Western Gulf states.....	3.74	1.96	1.78 deficiency.
Rio Grande valley.....	5.83	0.44	5.19 deficiency.
Tennessee.....	3.80	2.85	1.04 deficiency.
Ohio valley.....	3.49	2.28	1.21 deficiency.
Lower lake region.....	2.83	2.24	0.59 deficiency.
Upper lake region.....	2.85	3.09	0.24 excess.
Extreme northwest.....	2.85	5.03	2.20 excess.
Upper Mississippi valley.....	2.39	2.99	0.60 excess.
Missouri valley.....	2.74	3.25	0.51 excess.
Northern slope.....	1.37	1.73	0.36 excess.
Middle slope.....	2.23	3.29	1.07 excess.
Southern slope.....	3.08	2.96	0.12 deficiency.
Southern plateau.....	2.56	2.35	0.21 deficiency.
Northern plateau.....	0.31	0.19	0.12 deficiency.
North Pacific coast region.....	0.82	0.64	0.18 deficiency.
Middle Pacific coast region.....	0.02	0.01	0.01 deficiency.
South Pacific coast region.....	0.16	0.11	0.05 deficiency.
Mount Washington, N. H.....	7.54	8.63	1.09 excess.
Pike's Peak, Colo.....	4.85	0.25	4.30 deficiency.
Salt Lake City, Utah.....	0.86	0.73	0.13 deficiency.